7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

STRUCTURAL FORMS

MOUNDS AND PLATFORMS

Although no Tongan mounds are constructed entirely of stone, many mounds of earth have sides faced with stone retaining walls. Most of the mounds take the form of a truncated cone with flat top and sloping sides. Several mounds might be described as foreshortened cylinders terminating in flat tops marked by a large, cylindrical central pit with retaining walls of stone. One mound observed resembles a truncated pyramid with four stone-faced sides, which slope rather abruptly towards the flat top.

The stonework of the truncated cones differs radically from that of the cylindrical mounds. Most of the cone-shaped mounds are surfaced with rough stones piled indiscriminately one upon the other—a sort of cyclopean masonry. In some of these mounds, and in one truncated pyramid, the stones are roughly rectangular slabs. In some of them this technique is marked by smooth stone fitting, the stones exactly shaped and sized to occupy a certain position and to produce a continuous, regular veneering. All of the cylindrical mounds observed are retained by walls constructed after one pattern and of similar materials; rough pieces of limestone are piled one upon the other in a vertical wall of uniform width.

Platforms are of two types; round and rectangular. The rectangular type includes single platforms and storied platforms, or stepped pyramids. All platforms whether single or storied, round or rectangular, are earth filled enclosures retained by walls of upright slabs in contact at adjoining edges. In some of the smaller structures, the slabs are natural flat pieces roughly broken about the edges and but indifferently fitted together. In most structures, however, the stones of the retaining walls are dressed and sized, producing a smooth, unbroken wall of continuously even height, and fairly even thickness.

The distinction between low mounds with flat tops and platforms may seem arbitrary and vague. It is recognized here because of a corresponding distinction made by the native descendants of those who built these structures. The Tongans almost invariably base their nomenclature upon purpose and use rather than upon form or appearance, and it so happens that the term *sia*, which like the English "mound" refers to small elevations both natural and artificial, is generally applied to structures made for certain uses, but is not used to designate the types here described as platforms. Of all the structures observed, only those classified by the natives as *sia* lack the upright slab retaining walls which characterize all other earth and stone structures.

The tops of some mounds and platforms were made accessible by roadways, or approaches, ascending gradually from the surrounding land—the

7: McKern A-4,5 (1920-1921). 1929 OU9 Tonga OU9

length of the roadway being determined by the height of the structure. Most of these approaches were supported on either side by retaining walls, similar to the walls of the main structure. A few were paved with stone slabs or rough fragments of stone, or surfaced with gravel. Access to certain platforms was by means of low stone steps placed at certain points against the retaining walls. Where the low steps adjoin relatively high walls, they seem merely to have marked the proper place for mounting rather than to have afforded help in ascending the structure.

491 172 172 34

STONE HOUSE PARTS

Many ancient houses of the better class were supplied with a stone door sill, made or a single oblong, roughly blocked out hexahedron about a foot in width, which filled the base of the doorway to a height of somewhat less than a foot. Such stone sills appear in a few modern houses but it is probable that a wooden sill was always more common.

172 342 [333]

Stone house posts and rafters were seen in only one structure—a burial house situated on the top of a stone walled tomb on the island of Tongatabu. The fragments now remaining of these stone house parts are smoothly dressed and show rather elaborate end mortising (p. 38).

172 764 [333]

STONE WALLS AND MONUMENTS

Independent walls of stone are by no means common in Tonga, but are represented by several examples in fairly good condition. All these walls are built of undressed and irregularly shaped pieces of both reef limestone and "sandstone," of a size easily carried and handled.

172 333 34

Monumental stones form part of the retaining walls of many mounds and platforms. These are placed regularly to constitute a part of the wall and differ from the other wall elements only in their larger size. Usually they stand up abruptly, at or near a platform corner, to a height considerably greater than the average height of the wall.

172 34

Stelae of undressed basalt occur independent of other structures at certain places. The only one seen is in the town of Mua (p. 93), but two others are reported from the distant volcanic island of Niutoputapu. The great trilithon, Haamongaamaui (p. 63), situated in the eastern part of Tongatabu, stands out with paradoxical distinctness from all other Tongan structures, as well as from those of other Pacific islands. Not only is its shape unique, but the great size of the three dressed stones employed in the structure, and the deep mortising of the lintel piece into the uprights, render the work a surprising oddity as well as a worthy monument to Tongan ability and ingenuity in stone construction.

172 349 [333]

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

ARTIFICIAL MOUNDS AND PLATFORMS

CLASSIFICATION

Most ancient Tongan structures of mound or platform type may be classified as belonging to one of four groups: (a) *esi* mounds; (b) pigeon mounds; (c) house platforms, and (d) grave mounds. A few mounds with strong individual peculiarities and a few difficult to identify are, for convenience in presentation, treated as one group, (e) unclassified mounds. In this class are included the very rare stone walled house mounds. In general, this classification is based both on purpose, as recorded by tradition or determined by history, and on structural form. Purpose seems to have determined basic peculiarities in form.

ESI MOUNDS

An *esi* mound is essentially an area (usually in the form of a raised platform) reserved as a place of resting or siesta for members of a particular chiefly family, or for a particular member of a chiefly family. It was situated at a favorable point commanding a splendid view or frequented by cool breezes, or at a natural resting place intermediate between two important stations of a long journey. The use of these mounds seems to have been connected with the idea, prevalent in Tonga, that the exalted social position of the chieftain should be accompanied by material exaltation, and also, that social superiority involves the privilege of isolation from common contacts.

The use of *esi* mounds has survived, to some extent, as a modern complement to ancient tradition. At Vaini, Tongatabu, a rectangular platform which consists of concrete walls enclosing earth and sand, is the *esi* of King George I Tupou, built at his command in the nineteenth century. Small *esi*, consisting of prone coconut logs disposed to retain fills of sand, were observed at various places on the island of Tongatabu and were reported to be in regular use.

There are two radically different structural types of *esi*, the rectangular and the circular. The most common form is the rectangular platform, of which the poorest are those with retaining walls of coconut logs, perhaps the primitive type. The best examples have retaining walls of dressed stone slabs and attain imposing dimensions. The circular structures, with few exceptions, are retained by walls of undressed stones piled roughly one upon the other, converging toward the top of the mound.

Rectangular platform *esi* were seen in all three of the island groups which constitute Tonga and the finest two circular platforms are in Vavau and Tongatabu—at opposite ends of the Tongan archipelago (pp. 11, 18). The

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

towards the north. Both of these branches can be traced for several hundred yards of meandering course before they become too indistinct to follow. A second road extends eastward from the mound for a short distance and then disappears.

There is no central pit or other surface peculiarity on Siamoatao, which brings to mind the similarly pitless mounds on the island of Ualeva (Nos. 8, 9 and 10). The suggestion that such mounds may have been temporary abodes of chieftains engaged in pigeon snaring is here repeated as no other explanation is known.

The roads associated with these mounds probably served to furnish dry access to them across the surrounding swamp. Their technical structure constitutes a unique feature not observed elsewhere in old Tongan roads (p. 89).

UNCLASSIFIED MOUNDS

1. Tuavavau, several miles northwest of the town of Utungake, on the island of Utungake, Vavau (fig. 15).

According to a tradition recorded by Gifford (13, p. 202), Tuavavau was the name of a beautiful girl who lived on this mound. The story is that many lovers camped about the mound where they could often see her. Among these was the great chieftain Tuilakepa. Finally their unsought attentions drove the girl to distraction and she leaped over the cliff into the sea. There is said originally to have been a circle of small mounds about this structure, the sites for the houses of the many lovers. None of these mounds could be located. Intensive agricultural pursuits about the place may well have destroyed them, if they ever really existed.

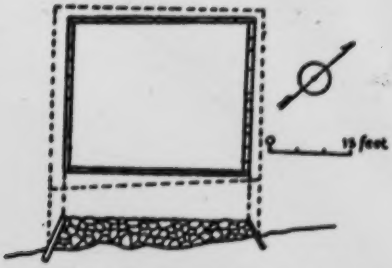

FIGURE 15.—Plan of Tuavavau, Utungake, Utungake Island, Vavau, height 2 to 6 feet, length at top 35 feet, width at top 29 feet.

Tuavavau is an artificial rectangular structure, built upon a rocky elevation near the shore commanding an excellent view of the surrounding country. The entire mound is solidly built of undressed slabs of coral "sandstone," save for a surfacing which consists of a row of dressed rectangular slabs set up on edge along the sides which stand at a slope of about 70°. The straight sides of the platform are placed quarterwise with

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

172 34 the compass. Many of the undressed stones in the body of the platform are sufficiently large to require several strong men to move them. Most of the dressed surface slabs have been removed recently to build a wall about the Wesleyan church at Utugnake. The only large one left in place measures 5.2 feet in height, 2.7 feet in width and 0.7 foot in thickness.

172 34 333 This square structure with its sloping, slab-surfaced sides is a form of stone masonry not at all characteristic of Tongan work. Its whole character seems more in harmony with Fiji and I am inclined to believe that this is the foundation for some important building erected directly under Fijian influence, if not actually by Fijians.

172 34 2. Unnamed mound on the island of Mango, Haapai (fig. 16).

The mound is circular and flat topped, standing close to the beach at the west end of the village. It is immediately surrounded by a very shallow ditch or depression,

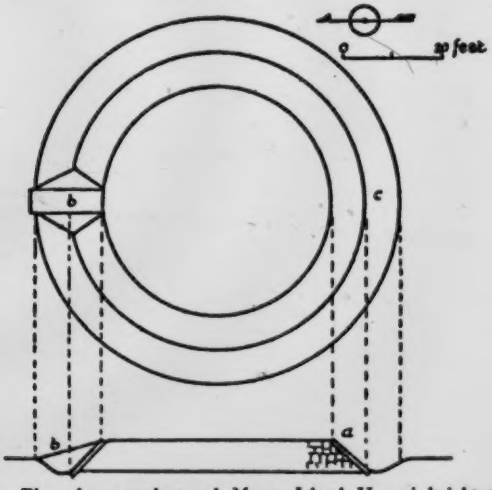

FIGURE 16.—Plan of unnamed mound, Mango Island, Haapai, height 5 feet, diameter at base 90 feet, diameter at top 70 feet: *a*, stone veneering on sides sloping about 25°; *b*, earth ramp ascending mound; *c*, moat 3 to 5 feet wide at base of mound.

crossed from the north by a fill of sand which is projected to constitute an inclined approach to the top of the mound. The sloping sides of the mound are faced with irregular flat slabs of coralline sandstone laid loosely, like tile.

172 34 173 [342] The structure is said to have been built as a house platform by Fijian warriors, brought to Mango by the Tongan king Ulukalala I, who is referred to by Captain Cook as Feenow (Finau). Whatever its original purpose, this structure is now used as a house mound, although entirely out of keeping with other Tongan *paepae*. It has certain strong Fijian features which seem

7: McKern A-4,5 (1920-1921) 1929 0U9 Tonga 0U9

to confirm the traditional account of its construction. Tongans who have been in Fiji assert that they have seen there house mounds exactly like this. On the other hand, the detail of construction is very much like that of some of the pigeon mounds on Ualeva (p. 21). Fijian influence may have been active in both places.

3. Group of mounds in the village of Malapo, Tongatabu, on the Nukualofa-Mua road.

This group includes several peculiar mounds that seem to be subject to much speculation by the inhabitants of the village. Not even their names could be ascertained.

In a row of mounds bordering the north side of the road, the first is a very large structure, the next much smaller and the others progressively smaller; the last being difficult to distinguish from the natural features of the surrounding country. At least four of these mounds are worthy of consideration.

The large mound is conical in shape with a gracefully rounded top. It is 18 feet high, 100 feet in diameter at the base, and the slope of its sides is about 25°. From all surface indications, the mound is composed entirely of earth and has no outstanding features other than its bulk. The remaining three mounds, 4 to 6 feet in height, are more oval in cross section. They are the present sites of houses.

An old man, not resident in the village, gave to the series of smaller mounds the name Afoteau (*afo*, a length of sennit-cord; *teau*, one hundred). This name is said to have originated from the fact that one hundred lengths of sennit cord were required in erecting on one of the mounds a house built by the chieftain Fasiapuli, the brother of Tuitatui, who, according to genealogical evidence, was king of Tonga in about the twelfth century. The place where these mounds stand is referred to in a mythological account which Gifford (11) obtained, as Haangongo (the family of Ngongo). The smaller mounds may be house mounds, but both the size and the shape of the large mound are against such an interpretation. Nor has it the appearance of a grave mound.

4. Two mounds on either side of the Mua road at Holonga, a village near Malapo.

These very large mounds greatly resemble in size and other characteristics the large mound at Malapo. They are mythologically accounted for as composed of the earth which Muni shook from the roots of the kava plant (13, p. 121). The absence of any historical account of origin may indicate a considerable antiquity.

5. Hauomomo, or Paepaeomomo (*hau*, a king other than the Tui Tonga; *o*, of; Momo, name of the first traditional king of Tonga; *paepae*, house platform), at the village of Haameniuli, Tongatabu.

Hauomomo is said to be the house mound of Momo, descendant of the worm, preceding the heavenly advent of the first Tui Tonga (13, p. 25). Its interior, exposed by a road cut, is of the same kind of earth as that of the surrounding surface soil. Nothing of special importance was found there.

7: McKern A-4,5 (1920-192?) 1929 OU9 Tonga OU9

172 34 342

6. Mound on the island of Euakafa, Vavau.

This structure is a rectangular platform of earth retained by walls of dressed, rectangular slabs of stone which are set up on edge and in contact end to end. It is 32 feet long, 28 feet wide, and about one foot high. Judging from size, proportions, and position, this mound was a house platform. This platform stands less than a quarter of a mile west of Talafaiva's langi (p. 49), on the same high platform which constitutes the entire top of the island, and some informants identified it as the house *paepae* for the residence of the chieftain Talafaiva. This is the only known rectangular platform in Tonga described as a house platform, with the possible exception of Tuavavau (No. 1). These two structures are similar in no other respect.

172 34

7. Mound platform on the island of Namukaeiki, Haapai.

The mound on Namukaeiki is a low, stone walled rectangular platform of earth retained by walls of roughly dressed stone slabs disposed on edge and in contact end to end. It is 30 feet long, 20 feet wide and 1 foot high. It was reported to be a langi, [342] but Gifford (11) describes it as more resembling the so-called house *paepae* on Euakafa. [764] The dimensions are certainly not those of a langi, if comparative data are of any value, but seem to be exactly suited to a house platform. On the other hand, it may be an *esi*.

8. Lefelefevalu (*lefelefe*, sexual organ; *valu*, eight), on the island of Eua, a short distance north of the village of Tufuvai.

Lefelefevalu is a large conical mound made entirely of earth, with a basal diameter of 150 feet. The sides slope upwards, at an angle of about 22°, to a flat top 25 feet in diameter and 22 feet above the base. Scattered about the centrally placed large mound at distances of 100 to 200 feet and with no apparent order, are five small mounds 4 to 5 feet in height and averaging 20 feet in diameter. There are reported to be eight of these smaller mounds but only these five could be located.

172 34 173

Little is known about Lefelefevalu, but a myth accounts for its supernormal origin in which the goddess Lefelefevalu and her eight lovers are the principal actors. The myth would seem to be a rationalized explanation of the origin of a phenomenon concerning which no true information remains. The story is more than symptomatic of that associated with the mound called Tuavavau (p. 27). It seems probable that the two stories are local renditions of one of those standardized myths, so common in Polynesia, that attach themselves to any favorable site that seems in need of explanation.

GRAVE MOUNDS

Classification

172 764

There is a threefold native classification of primitive burial places in Tonga. The mound marking the burial of an ordinary man is called *tanuanga*, that marking the burial site of a chieftain, his family and his principal retainers is called *faitoka*, and that in which members of the Tui Tonga family are buried is called langi. As is usual with native classifications in Tonga, these terms refer to use rather than to structural form. Thus the grave of a Tui Tonga, regardless of its shape, size, structural detail or other peculiarities, is a langi. As a rule, however, there were normal types of *tanuanga*, *faitoka*, and langis.

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

where in the Pacific. It would be remarkable if Tonga and some distant Oceanic group should have independently developed the same type of vault. The presence of vaults in Fiji similar to those in Tonga is undoubtedly due to diffusion, but the direction of this diffusion is not too certainly known.

A platform or terraced type of stone structure, used for various purposes and designated by various names, has been reported from many parts of Polynesia. Its widespread occurrence argues against an independent development in Tonga. Nowhere outside Tonga, however, has such a structure been associated with the name "langi." The local peculiarities of the stonework and structural shape show sufficient independence from other Pacific types to deserve careful consideration in this connection. After all, stone platforms and pyramids are not peculiar to the Pacific but are found on all the northern continents, and it does not necessarily follow that all stone pyramids are culturally connected. Stonework associated with a pyramidal shape does not offer so extraordinary a combination as to warrant diagnostic conclusions.

A strictly structural survey of the langis themselves, disregarding all native traditional accounts, might lead to the temptation to arrange langis in time sequence according to the degree of development in structural features exhibited. By such a scheme the Type A langi would be rated the oldest, Types B, C, and D logically following in the order named. The pyramidal Type E structures would end the development and so appear last upon the scene, culminating in Telea's exceptionally splendid tomb.

However, incomplete and doubtful as the traditional and historical records may be, there are sufficient facts to absolutely refute a theory of time sequence. The genealogies, jealously kept and protected by the pride of blood which must always be associated with high social or political rank, are probably fairly accurate as far back as Telea, otherwise known as Uluakimata I. A time sequence based upon structural development is basicly wrong in that it fails to take into consideration the undulation of cultural progress, the ebb tides as well as the flood tides, the alternating of periods of retrogression with periods of climbing achievement that has marked the history of all culture.

It seems reasonably sure that native tradition has fairly accurately placed two of the langis in relative time relation to each other. These are Heketa, built by Tuitatui, and Paepaeotelea, Uluakimata's great masterpiece. There seems no logical reason to doubt the origin of these structures. According to genealogical data, Heketa was built in the early eleventh century, Paepaeotelea in the middle of the sixteenth century. This gives a certain time check with which to guide conclusions.

Conclusions

The great stone monuments of Tonga, of which some of the langis and the trilithon at Hahake are the best examples, are works of the present race

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

172 361 [363] [368] [137] through its center. The yard of the Catholic church occupies a part of its western half and other modern houses and fenced-in yards now cross its boundaries. A few *ovava* trees are still standing and the roots of the tree Manaui are still to be seen.

172 34 [368] [643] Southeast of the *malae* is the mound called Takuilau (*taku*, Fijian term meaning land at the back of a mountain; *i*, in; Lau, a group of islands in Fiji). This is a circular mound of sand, with irregular surface nearly 50 yards in base diameter, where, some say, were buried all refuse materials intimately pertaining to the physical body of the Tui Tonga. Blood from wounds, hair, vomit or anything else that was considered to be a severed part of the kingly body was carefully preserved and buried in this sand pile. From another source comes the contradictory statement that Takuilau was the house-mound of the Tui Tonga Fefine, the oldest sister of the Tui Tonga. [342] This mound, however, is entirely unlike any house-mound observed in Tonga. Not only is its shape different but Tongan house-mounds were not built of sand unless the foundation and the land immediately adjoining were also of sand. This mound, on the other hand, has much the appearance of a burial place.

172 361 Immediately north of the *malae* was a broad clearing, having much the appearance of a broad road. It appears to have had no name but is said to have been 15 to 20 "fathoms" (about 100 feet) in width and to have been lined by large *ovava* trees.

172 368 The northern part of the fortified area is occupied by four great stone langis of the Tui Tonga (pp. 39, 56, 58).

644 Just west of these tombs was an area called Fanakava. Its boundaries cannot now be determined, but it is said that one side touched the langis and that the other side merged into the great clearing. Fanakava was a rectangular and oblong area covered by a grassy turf. Some describe it as surrounded by a reed fence, others as without a fence. It was a *malae* of the Tui Tonga, where he occasionally presided over his kava circle. There was no house, priest, or guardian of this place, yet there was one peculiar, religious tradition [696] associated therewith. Within its boundaries refugees from retribution were safe from attack (12).

172 363 There is every indication that the old road did not follow the course of the present highway through Mua. Rather, it avoided the fortified area, passing south and east of the embankment and extending east and northeast to parallel the eastern margin of the row of langis.

172 368 764 Outside the fortification, the langis continue as two parallel rows comprising 13 structures. North of these two rows are two other langis. On the flat outside of the ancient shore line are two langis, 50 feet south of which is a large *faitoka* with the lids of two stone vaults exposed to view on its

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

superior surface. All of these langis, 4 inside and 17 outside of the fortified area, are considered as being in Lapaha (pp. 36-61).

Maolunga includes the dwelling house, outbuildings and burial place of the Tui Haatakalaua family, said to have been first built and occupied by Moungamotua, the first Tui Haatakalaua, and the younger brother of Tui Tonga Kauulufonuafekai.

The dwelling house called Fonuamotu was a large thatched building of the better class standing upon a low, earthen *paepae* about 50 yards from the present shore line.

Southwest of this house stood a mound called Nukukausiala which formed the *paepae* of the house called Falesinifu (House-of-concubines) where the common wives of the chieftain dwelt. As it appears today this mound is essentially a rectangular platform of earth, 110 feet long, 75 to 91 feet wide, 3 feet high on its land side, and 8 feet above the bottom of the lagoon. More than half of the mound stands out from the shore upon subaqueous foundations. Its sides are faced with loosely piled coral stones, many of large size. Some of the slabs are dressed and others show a rude smoothing. The eastern wall of the mound is so sloping as to permit walking up the incline. The inclination of the other three walls is about 70°.

Immediately south of Nukukausiala is a somewhat similar platform, 35 feet wide. On the lagoon side where the structure just overlaps the low-tide mark, its top is 3.5 feet above the lagoon bottom; on the land side the height is 2.3 feet. The vertical retaining walls are built partly of rough stones and partly of dressed slabs. In the seaward wall, close to the northwestern corner of the platform, is a large, flat, circular stone, 1 foot thick and 10 feet in diameter, a natural coral growth known as brain-coral or mushroom-coral. The stone stands on edge 6.5 feet above the top of the platform. It is called Filimoimaka, the name of the chieftain who brought it from near Kolonga and presented it as a gift to the Tui Haatakalaua. Its purpose and use seem to have been purely ornamental. On this mound stood the house which served as the cohabital house of the chieftain and his common wives. No general name for this type of house, or specific name for this particular house, could be found.

From the western end of Nukukausiala and extending out into the lagoon is an irregular pile of large, rough, coralline rocks about 25 feet in width and 500 to 600 feet in length, called Mounu. The formation is undoubtedly artificial. A common story accounts for this rocky isle as built up from the discarded oven-stones of the great sailing vessel *Lomipeau*, the boat that is reputed to have brought stone slabs from Wallis Island as material for one of the large langis. Another account explains this pile of stones as the beginning of a causeway that the Tui Tonga Pau started to build across the lagoon

7: McKern A-4,5 (1920-1921) 1929 OU9 Tonga OU9

from Mua to the Tukutonga point east of Nukualofa (p. 18). The first account needs no comment; the second is highly improbable.

About 50 feet southeast of Nukukausiala is a circular, round topped sand mound, 40 feet in base diameter and 3 feet high. It is the burial mound (*faitoka*) where the common wives of the Tui Haatakalaua were buried.

A few yards northeast of this *faitoka* is the low, oval, earthen mound where the house called Falekilikili formerly stood. This house served as a place where the small, black, volcanic pebbles called *kilikili*, used in decorating grave mounds, were sorted and oiled previous to use. Ordinarily this house was tapu to every one. Only after a death in the Tui Haatakalaua family were the old women from among the chieftain's retainers permitted to enter this house and perform the duties associated with it. Close to the north side of Falekilikili was a shallow, funnel-shaped well where the old women washed their hands after oiling the *kilikili* stones.

The inlet from the lagoon is now nothing more than a small mangrove swamp, but anciently it is said to have contained sufficient water to permit large, double-hulled sailing vessels to enter and anchor. Traces of stone work about the edges of this swamp suggest that the channel was at least partly artificial. The stones seen are dressed coral slabs, generally showing only their tops above ground at the swamp edge.

In the center of the inlet, opposite the *faitoka*, there is a small island called Vakaniua. It was at this island that the sailing vessel of the Tui Haatakalaua was moored when at the home port. The island derived its name from the boat, the name being progressively handed down from one boat to its successor. The original boat derived its name from having carried the chieftain Fotofili to the island of Niuafoou, north of the Vavau group.

About 50 yards east of the house Fonuamotu stood the house called Tukumotafa, the dwelling of Lauaki, ranking matapule (non-chiefly official) in the suite of the Tui Haatakalaua. It is now marked by an earthen *paepae* of the usual shape with its major axis about 35 feet long.

About half way between the house of the chieftain and that of his ranking matapule was the chieftain's bathing place, called Malama. It is a funnel-shaped, circular basin about 20 feet in diameter, said originally to have been one "fathom" deep but now not more than 2 feet deep and quite dry. It is not known whether the bath was naturally supplied with water, which would necessarily be brackish, or was filled with rain water from the roofs of the houses, said to have been the source of supply of many of these bathing places.

The cemetery of the Tui Haatakalaua lay inside the ancient shore line. It now consists of four stone-walled burial platforms, collectively called Loamanu, a name derived from the largest of the burial structures. (See p. 58.)

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[facing p. 96-A]

54: Cook G,T-5 (1777) 1967 OU9 Tonga OU9

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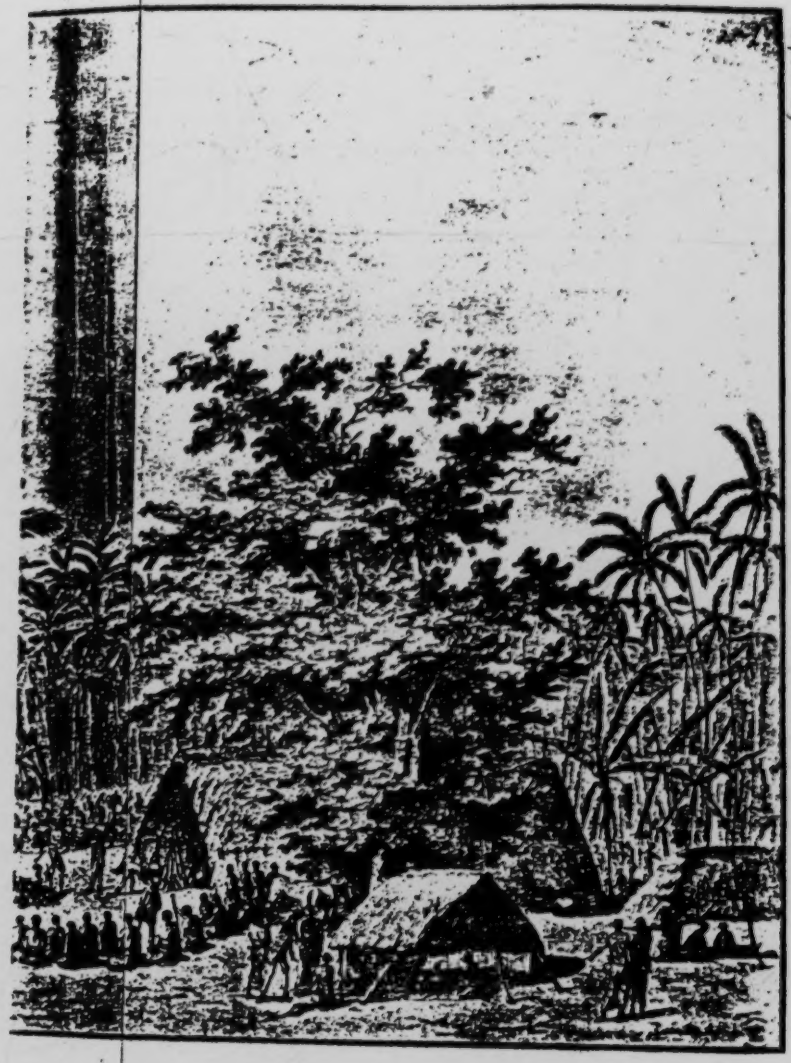
PL. 15. Annamocka (Nomuka) harbour
Drawing by Webber.—B.M., Add. MS 15513-7

[facing p. 96-B]



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[facing p. 96-C]